

NOTES ON A FEW SPECIES OF MACROSIPHINI
(APHIDIDÆ) FROM UTAH WITH DESCRIPTIONS OF TWO NEW SPECIES¹BY GEORGE F. KNOWLTON²***Tritogenaphis kosacaudis* Knowlton, n. sp.**

This bushy-tailed aphid is occasionally collected from the tip growth of rabbit brush, *Chrysothamnus nauseosus*. In no instance has it been observed in large numbers. This species was first collected at Providence, Utah, on July 18, 1925. Collections have also been made at Bothwell and Blacksmith Fork Canyon.

In a number of respects this aphid resembles *Tritogenaphis ludoviciana* (Oestlund).³ From the latter species it differs in being darker-colored, lacking the conspicuous grayish pruinose covering over the body and in usually having longer cornicles and a darker cauda.

Alate vivipara. Color greenish brown to brownish black; size 3 to 3.5 mm. long; antennæ longer than the body, black, except segments I, II, and base of III, which are dusky; antennal III, 0.91 mm. long, with 35 to 50 round sensoria; IV, 0.81 mm.; V, 0.75 mm.; VI, 0.15 + 0.95 mm.; legs long, hind tibia 2.28 mm. long; wing venation typical, veins slender; cornicles black, 0.77 to 0.85 mm. long; cauda dusky, long, bushy, with eight to ten hairs on each side; anal plate rounded to somewhat triangular.

Type in the collection of the writer. Paratypes in the United States National Museum.

***Tritogenaphis escalantis* Knowlton, n. sp.**

This shiny green aphid was collected at Providence, Utah, on July 18, 1925, from the tender apical growth of rabbit brush, *Chrysothamnus nauseosus*.

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² The writer wishes to thank Professor O. W. Oestlund and Dr. E. M. Patch for their opinions concerning some of the species discussed in this paper.

³ *Tritogenaphis ludoviciana* (Oestlund), frequently encountered in Utah, being found usually as scattered individuals. Occasionally this species is in colonies on the tender parts of white sage, *Artemisia* sp., especially toward the end of June. During early July, 1925, alates were collected in Logan Canyon and at Zion National Park.

Alate vivipara. Color shiny apple green; size 3.1 mm. long; rostrum reaching second coxæ; antennal tubercles well developed and diverging; antennæ black except segments I, II, and base of III, which are lighter; antennal III, 0.77 mm. long and armed with about forty round sensoria; IV, 0.67 mm.; V, 0.53 mm., with primary sensorium near distal end; VI, 0.17 + 0.82 mm.; legs long, hind tibia 1.9 mm. long; wing venation typical; abdomen oval; cornicles 1.1 mm. long, black, with basal portion lighter and noticeably widened; cauda long, tapering, slightly dusky, with three hairs on each side and one on the dorsal surface near distal end; anal plate rounded.

Type in the collection of the writer.

TRITOGENAPHIS RUDBECKIÆ (Fitch)

This reddish species is rather common in Utah, occurring on *Rudbeckia*, golden glow, and other plants. It has been collected from Benjamin, Garland, Hyrum, Logan, Provo, St. George, Salt Lake City, Zion National Park, and many other localities in this state.

TRITOGENAPHIS AMBROSIÆ (Thomas)

This is one of the most common aphids in Utah. It is very often extremely numerous on species of *Iva* and *Ambrosia*, especially along county roads. Sunflowers and many other plants are also attacked by this species. Collections have been made from Amalga, Bear River City, College Ward, Corinne, Cove, Farmington, Honeyville, Hurricane, Kanab, Lewiston, Logan, Madsen, Mantua, Panguitch, St. George, Snowville, Trenton, and many more localities in Utah.

TRITOGENAPHIS ERIGERONENSIS (Thomas)

This species has been collected in Utah on *Erigeron superbus* and *Ambrosia trifida*. It has been found in Springdale and also in Zion National Park, where it was very abundant on July 10, 1925.

MACROSIPHUM ROSÆ (Linnæus)

This aphid is present in Utah, occasionally becoming numerous on the apical growth on rose bushes. It is sometimes encountered in colonies of *Amphorophora nervata* (Gillette) and along with *Capitophorus rosarum* (Walker).

MACROSIPHUM PSEUDOROSÆ (Patch)

This species was collected at Brighton, Utah, on June 29, 1925, infesting *Senecio uintahensis*. It also occurs in canyons, attacking wild-rose bushes.

MACROSIPHUM PACKI Knowlton

The winged form was collected at Spry, Utah, June 27, 1927, feeding on the tender apical growth of rabbit brush, *Chrysothamnus nauseosus*. Additional localities in Utah from which this aphid has been collected include the following: Beaver Canyon, Bryce Canyon, Chester, Circleville, Elsinore, Emery, Geneva, Huntington, Mona, Nephi, Santaquin, and Vineyard.

Alate vivipara. Size 2.3 mm. long and rather narrow; eyes prominent, with ocular tubercles poorly developed; antennæ black, except segments I, II, and base of III, which are dusky, and armed with conspicuous sensilla; antennal III, 0.75 mm. long and armed with twelve to sixteen sensoria, sometimes confined to an irregular row; IV, 0.84 to 0.87 mm.; V, 0.7 mm.; VI, 0.15 + 0.9 to 0.16 + 0.93 mm.; legs rather long, hind tibia 1.45 mm. long; wing veins a dusky brown; fore wings with media twice branched; hind wings with both media and cubitus present; abdomen green; cornicles black except base which is dusky, 0.83 mm. long, slender, slightly thicker toward base and slightly swollen preceding the weak flange; cauda black, long, usually with three hairs on each side and one on dorsal surface near distal end; anal plate black, slightly elongate to rounded.

MACROSIPHUM DIRHODUM (Walker)

The apterous and alate females of this species were collected on canary grass, *Phalaris* sp., in Blacksmith Canyon, on July 18, 1925. The aphids were quite numerous, feeding in the groove formed by the angle of the leaf.

AMPHOROPHORA COSMOPOLITANA (Mason)

This aphid was collected at Magna, Utah, on October 7, 1927, by Dr. H. J. Pack. At this time both winged and apterous females were abundant on spiny sow thistle, *Sonchus asper*. Winged forms of this species were present during the fall of 1926, on sugar-beets at Cornish, one alate female was collected during the same season on boxelder at Blacksmith Fork Canyon, Utah.

ACYRTOSIPHON PISI (Kaltenbach)

This aphid is commonly found on peas, alfalfa, and on various other species of the Leguminosæ throughout the agricultural sections of Utah. During 1924 all of the sweet-pea seed crops at Smithfield were destroyed. During 1927 severe damage occurred in a few alfalfa fields at Richfield and in some other southern Utah localities. When the young alfalfa was attacked by such enormous numbers of aphids, as in the latter localities, the tops sometimes became rather whitened. More or less damage occurs in Utah every year to alfalfa and peas, as this aphid is usually rather abundant wherever either of these crops is raised.

ACYRTOSIPHON CALIFORNICA (Clarke)

This elongate species is occasionally taken in Utah, feeding in colonies on the young sapwood of the willow, *Salix amygdaloides* and *S. lutea*. Both winged and wingless individuals have been taken between the middle of June and the end of July at American Fork Canyon, Blacksmith Fork Canyon, Cedar Canyon, Millville, Morgan, and Providence, Utah.

ACYRTOSIPHON GRANARIUM (Kirby)

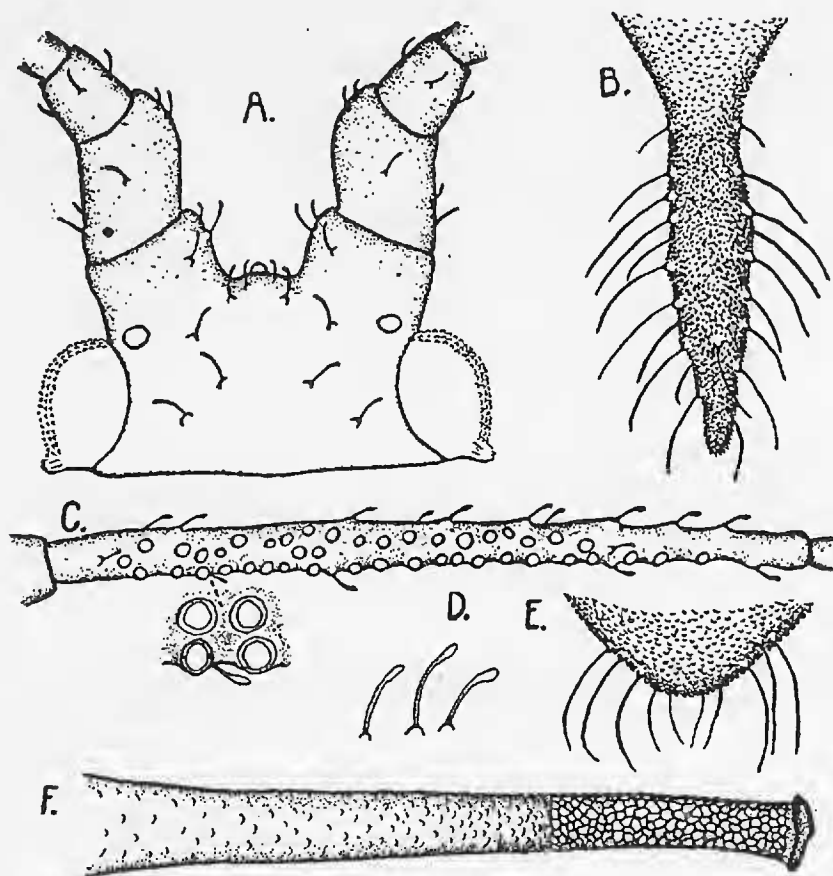
This species is frequently encountered on oats and wheat in Utah, but has seldom been observed in damaging numbers. Collections of this species have been made at Brigham City, Circleville, Eden, Kanesville, Logan, Meadow, Nephi, Panguitch, Richmond, and Smithfield, in Utah. The writer has also collected this species from Clifton and Preston, Idaho.

ACYRTOSIPHON SOLANIFOLII (Ashmead)

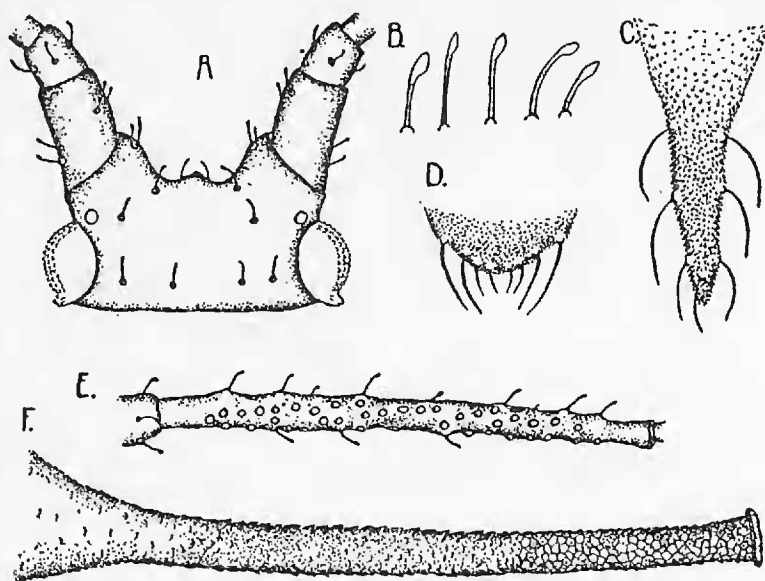
This common potato aphid is present throughout much of Utah, attacking potato, rose, and many cruciferous plants. Very often this species is less abundant on potatoes than the green peach aphid, *Myzus persicæ* (Sulzer). Collections have been made in Utah from the following places: Brigham City, Farmington, Kanesville, Layton, Lewiston, Logan, Morgan, Ogden, Richfield, St. George, and Tooele.

ACYRTOSIPHON PELARGONII (Kaltenbach)

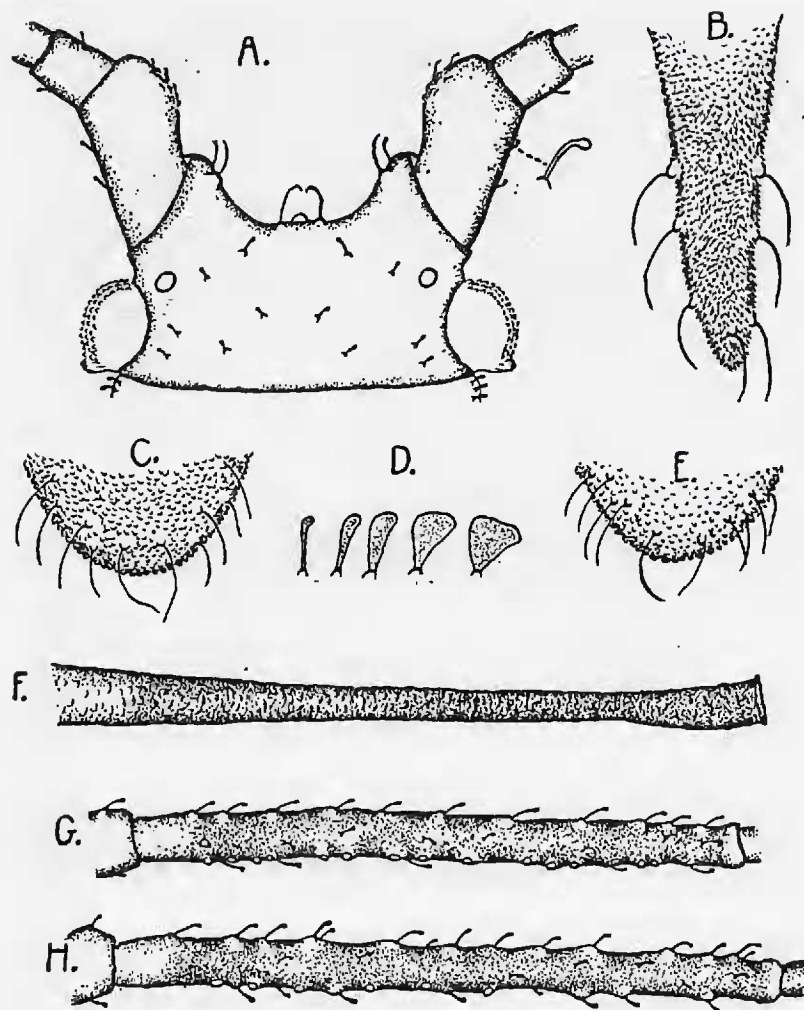
A single collection of this species was made at Tooele, Utah, on July 10, 1924. *Pyrus malus* was the host plant.



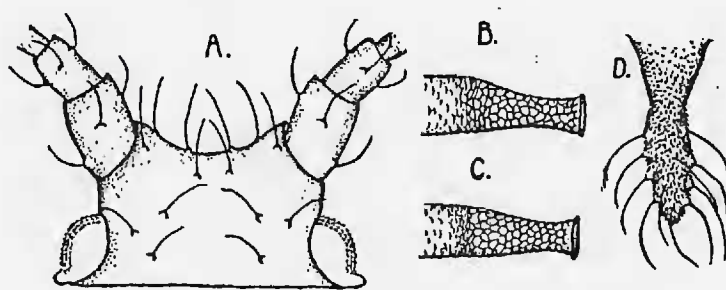
Tritogenaphis kosacaudis n. sp. A, head; B, cauda; C, antennal III; D, body hairs; E, anal plate; F, cornicle; all drawings of alate viviparous.



Tritogenaphis escalantis n. sp. A, head; B, body hairs; C, cauda; D, anal plate; E, antennal III; F, cornicle; all drawings of alate viviparous.



Macrosiphum packi Knowlton. A, head of alate viviparous; B, cauda of alate; C, anal plate of alate; D, body hairs of apterous viviparous; E, anal plate of apterous; F, cornicle of alate; G, antennal III of alate; H, antennal III of apterous.



Macrosiphoniella sanborni (Gillette). A, head of apterous viviparous; B, cornicle of apterous; C, cornicle of alate viviparous; D, cauda of alate.

MACROSIPHONIELLA SANBORNI (Gillette)

This aphid was present in small numbers feeding on chrysanthemums in greenhouses in Salt Lake City, Utah, on September, 17, 1924.